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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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21171	7590	11/21/2007	EXAMINER	
STAAS & HALSEY LLP			PATEL, NITIN C.	
SUITE 700			ART UNIT	PAPER NUMBER
1201 NEW YORK AVENUE, N.W.			2116	
WASHINGTON, DC 20005				

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11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/781,324	KONAKA, YOSUKE	
	Examiner	Art Unit	
	Nitin C. Patel	•2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 September 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,4,6,7,9,11,13,15,16,18,20,22,23,25 and 27-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in responsive to amendment filed on 20 September 2007.
2. Claims 2, 5, 8, 10, 12, 14, 17, 19, 21, 24, and 26 have been canceled.
3. Claims 1, 3 – 4, 6 – 7, 9, 11, 13, 15 – 16, 18, 20, 22 – 23, 25, and 27 – 42 are currently pending with the application.

Claim Objections

4. Claims 1, is objected to because of the following informalities:
5. In the claim 1, on line 6, insert "mounted" in between the words "the" and "batteries" as 'part of the mounted batteries' is previously claimed.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 3, 25, and 27 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al. [hereinafter as Takizawa], Us Patent 5,739,596, and further in view of Pole, II et al. [hereinafter as Pole], US Patent 6,272,642 B2.

7. As to claims 1, 3, 25, and 27, Takizawa discloses an electronic apparatus [handheld or laptop fig. 1] to which pluralities of batteries detachably mounted [101 102, main batteries are inserted and removed] comprising: a removal requirement receipt section [14, and 15 detector switch operates and generates an interrupt signal within battery controller when one of battery cover (45, 46) is opened] for receiving a removal requirement for a part of [101, 102 main battery packs] the mounted batteries [101, 102 main battery packs] [col. 5, lines 40 - 59, col. 8, lines 12 – 21, col. 11, lines 17 - 26, fig. 1, 3A, 3C]; a processing ability determination section [battery controller] responsive to the removal requirement for the part of the batteries from which said removal requirement receipt section to determine whether a supplying possible electric power from the remaining batteries is capable [non-selected battery's charge level is determined that is sufficient] of maintaining a processing ability [col. 9, lines 2 – 5, col. 14, lines 45 – 47] or an electric power capable of maintaining a lowered processing ability [col. 9, lines 1 – 5, col. 10, lines 33 – 43]; and a processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not when the part of the mounted batteries is removed [disconnected][col. 2, lines 15 – 22, col. 9, lines 2 – 67, col. 10, lines 1 – 64, col. 11, lines 17 - 26, col. 12, lines 24 - 62, col. 14, lines 30 - 60, fig. 5, 8].

However, Takizawa's does not teach about lower the processing ability while keeping the electronic apparatus operative in accordance with a decision from determination section that the electric power needs to lower the processing ability. In summary, Takizawa does not teach different modes of operation with different processing ability depending upon the available charge level determination of un-selected battery.

Pole teaches a system and method for managing system's different performance state, which is adapted to transition from a first performance to a lower activity states [C1, C2, C3] in response to the power management event while keeping the electronic apparatus operative and the power management event is generated in response to a change in system's power source [abstract, col. 1, lines 36 - 45, col. 2, lines 1 - 36, col. 4, lines 24 - 41, col. 6, lines 15 - 60, col. 7, lines 1 - 63].

It would have been an obvious to one of an ordinary skill in art, having the teachings of Takizawa and Pole in front of him at the time of invention was made, to modify the processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not disclosed by Takizawa to include a transition to lower processing ability [lower performance state] in response to determination that low charge level instead of directly stop state which prevent system reset, and the signal VRPWRGD is maintained active during the performance state transition by control logic and system may trigger a performance state change including an over a temperature condition where a predefined temperature threshold in a thermal zone of computer system has been violated, and system usage

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is monitored, with events generated to trigger switching to a lower performance state if usage is low which obviously also lengthen the life of battery [col. 6, lines 15 - 38].

8. As to claims 4, and 6, Takizawa teaches a portion [processor] receiving a clock [internal clock] and operative in synchronism with clock [external clock] while consuming an electronic power according to a repetitive frequency of clock [internal clock frequency settings], wherein processing ability control section changes [changing] over the frequency [frequency settings] of the clock [internal clock] to control the processing ability [col. 4 lines 1 - 61, col. 5, lines 15 -39, col. 6, lines 1 - 4].

9. As to claims 7, Takizawa teaches display section for displaying inhibit or acceptance of the removal of battery on LCD display [col. 5, lines 4 - 36, fig. 8].

10. As to claim 9, 12, and 30 – 33, Takizawa teaches monitoring section for monitoring residual electric power by measuring voltage and current of mounted batteries and determines residual electric power [battery controller monitors by measuring voltage level and current of battery pack][col.7, 37 - 48, col. 13, lines 52 - 67, col. 14, lines 1 - 10].

11. As to claims 13, and 15, Takizawa teaches plurality of main batteries, which are chargeable [rechargeable] batteries and capable of being mounted on an electronic apparatus [col. 5, lines 40 - 45, col. 3, lines 5 - 21, fig. 2, 3A-3C, 4].

12. As to claim 28, Takizawa teaches a processing ability determination section receives the removal requirement for a battery from said removal requirement receipt section [col. 5, lines 40 – 60, col. 6, lines 34 – 44] and determines whether an electric power supplying ability is insufficient with only the remaining batteries [col. 10, lines 54

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– 57], even if the processing ability of said electronic apparatus is lowered [col. 7, lines 45 – 55, col. 8, lines 12 – 21, col. 9, lines 1 – 5, col. 10, lines 9 – 64], and said processing ability alteration instruction apparatus further comprises a removal acceptance display section displaying inhibit or acceptance of the removal of a battery according as said processing ability determination section determines whether an electric power supplying ability is insufficient with only the remaining batteries, even if the processing ability is lowered [col. 5, lines 4 – 14, col. 12, lines 7 – 63, fig. 2].

13. As to claim 29, Takizawa teaches display section for displaying inhibit of acceptance of the removal of battery on LCD display [10] [col. 5, lines 4 – 36, fig. 2].

14. Claims 16 - 23, and 34 - 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al. [hereinafter as Takizawa], Us Patent 5,739,596, and further in view of Pole, II et al. [hereinafter as Pole], US Patent 6,272,642 B2 as applied to claims 1 - 15, and 25 - 33 above, and further in view of Dunstan, US Patent 5,600,230.

15. As to claims 16 - 23, and 34 - 42, Takizawa discloses an electronic apparatus and method for power delivery with power supply system which includes pluralities of main batteries detachably mounted [main batteries are inserted and removed] comprising: a removal requirement receipt section [14, and 15 detector switch operates and generates an interrupt signal within battery controller when one of battery cover (45, 46) is opened] for receiving a removal requirement for a part of [101,102 main battery packs] the mounted batteries [101,102 main battery packs] [col. 5, lines 40 - 59, col. 11, lines 17 - 26, fig. I, 3A, 3C]; a processing ability determination section responsive to the

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removal requirement for determining whether a supplying possible electric power from the remaining batteries is capable [non-selected battery's charge level is determined that is sufficient] of maintaining a processing ability [col. 14, lines 45 - 47]; and a processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not [col. 11, lines 17 - 26, col. 12, lines 24 - 62, col. 14, lines 30 - 60, fig. 5, 8].

However, Takizawa's does not teach about lower the processing ability while keeping the electronic apparatus operative in accordance with a decision from determination section that the electric power needs to lower the processing ability. In summary, Takizawa does not teach different modes of operation with different processing. ability depending upon the available charge level determination of unselected battery. Pole teaches a system and method for managing system's different performance state, which is adapted to transition from a first performance to a lower activity states [C1, C2, C3] in response to the power management event while keeping the electronic apparatus operative and the power management event is generated in response to a change in system's power source [abstract, col. 1, lines 36 - 45, col. 2, lines 1 - 36, col. 4, lines 24 - 41, col. 6, lines 15 - 60, col. 7, lines 1 - 63].

However, Takizawa and Pole teaches that the battery packs are capable of being mounted on electronic apparatus but non of them discloses that each of battery packs have a memory for storing a residual electric power of a battery of an associated battery pack. Dunstan teaches a smart battery [82, fig. 4] includes a rechargeable battery [80], micro-controller [56], and memory [60] for storing different charge values [61 - 71 in fig.

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4] including monitoring and calculating remaining capacity value by measuring battery's con [col. 8, lines 44 - 67, col. 9, lines 1 - 64, col. 10, lines 38 - 63].

It would have been an obvious to one of an ordinary skill in art, having the teachings of Takizawa, Pole and Dunstan in front of him at the time of invention was made, to modify the processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not and replacing power source not limited to rechargeable alkaline, nickel-cadmium and nickel metal hydride batteries [col. 3, lines 12 - 15] disclosed by Takizawa to include a transition to lower processing ability [lower performance state] in response to determination that low charge level instead of directly stop state which prevent system reset, and the signal VRPWRGD is maintained active during the performance state transition by control logic and system may trigger a performance state change including an over a temperature condition where a predefined temperature threshold in a thermal zone of computer system has been violated, and system usage is monitored, with events generated to trigger switching to a lower performance state if usage is low which obviously also lengthen the life of battery [col. 6, lines 15 - 38]; and to include Dunstan's smart battery with rechargeable battery, memory, and controller which calculates and updates remaining capacity value based on battery current, and battery's characteristics and periodically compares capacity alarm value and sends capacity alarm signal when remaining capacity value is less than the alarm value which controls its own charge cycle to optimize charge time, prolong battery life, and prevent destructive charging conditions too [col. 3, lines 58 - 67, col. 4, lines 1 - 17, col. 7, lines 18 -33].

Response to Arguments

16. In response to applicant's arguments regarding the claims 28 – 29, rejection is addressed and therefore non-final office action is issued even though the same limitation was addressed under claim 7.

17. Applicant's arguments filed 20 September 2007 have been fully considered but they are not persuasive.

18. In response to applicant's arguments to individual Takizawa and Pole references, the examiner pointing out that the rejection was made under 35 U.S.C. 103(a) in combination of both Takizawa and Pole.

19. In response to applicant's arguments, "Takizawa and Pole, either alone or combination, do not teach or suggest a system having a processing ability control section that lowers the processing ability when the part of the mounted batteries is removed". The examiner disagrees as, Takizawa teaches an electronic apparatus [handheld or laptop fig. 1] to which pluralities of batteries detachably mounted [101 102, main batteries are inserted and removed] comprising: a removal requirement receipt section [14, and 15 detector switch operates and generates an interrupt signal within battery controller when one of battery cover (45, 46) is opened] for receiving a removal requirement for a part of [101, 102 main battery packs] the mounted batteries [101, 102 main battery packs] [col. 5, lines 40 - 59, col. 8, lines 12 – 21, col. 11, lines 17 - 26, fig. 1, 3A, 3C]; a processing ability determination section [battery controller] responsive to the removal requirement for the part of the batteries from which said removal requirement receipt section to determine whether a supplying possible electric power

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from the remaining batteries is capable [non-selected battery's charge level is determined that is sufficient] of maintaining a processing ability [col. 9, lines 2 – 5, col. 14, lines 45 – 47] or an electric power capable of maintaining a lowered processing ability [col. 9, lines 1 – 5, col. 10, lines 33 – 43]; and a processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not when the part of the mounted batteries is removed [disconnected][col. 2, lines 15 – 22, col. 9, lines 2 – 67, col. 10, lines 1 – 64, col. 11, lines 17 - 26, col. 12, lines 24 - 62, col. 14, lines 30 - 60, fig. 5, 8].

20. **Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

21. **Prior Art not relied upon:** Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 571-272-3675. The examiner can normally be reached on 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nitin C. Patel
Nitin C. Patel 11/19/07
Patent Examiner
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